THE EFFECT OF PEPPERMINT TEA ON THE SEVERITY OF DYSMENORRHEA

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Abstract: **Background:** The incidence of menstrual pain or dysmenorrhea according to the World Health Organization (WHO) is an average of more than 50% of women in every country experiencing menstrual pain. The incidence of menstrual pain in Sweden is 72%, in the United States it is estimated that 90% experience menstrual pain and 10-15% of them experience severe dysmenorrhea which causes inability to carry out activities, while the incidence rate in Indonesia is 55% of productive women. dysmenorrhea was 64.25% which occurred from 54.89% primary dysmenorrhea and 9.36% secondary dysmenorrhea. As many as 1.07% / 1.31% of dysmenorrhea sufferers came to the obstetrics department due to the complaints they felt. Disminorhea usually occurs 12 months after menarche until the woman is approaching menopause. One of the non-pharmacological therapies is to use mint leaf extract by administering peppermint tea. Mint leaves are good for the body, such as cooling the digestive tract, or if you have an upset stomach it helps relieve the pain. Peppermint contains menthol, menthyl acetate, menthone, potassium, calcium, B vitamins and several other therapeutic ingredients which make it a large component of many herbal tea recipes.
Methods: An article search was conducted on September 13, 2021 using the Pubmeed database, Google Scholar, Science Direct, and the Cochrane Library.
Results: Results Ask the scale of pain experienced during menstruation by measuring using the Numeric rating scale (NRS) and the Wong-Baker FACES Pain Rating Scale. NRS is on disc 8 which means severe pain and Face pain is on a scale that greatly interferes with activities. After the intervention of consuming peppermint tea for 3 days, the Pain Rating Scale was in moderate pain.
Conclusion: Peppermint tea intervention can significantly reduce dysmenorrhea

Keyword : Peppermint tea, dysmenorrhea, numeric rating scale (NRS)

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BACKGROUND

Menstruation is the shedding of the endometrial lining accompanied by bleeding that occurs repeatedly every month except during pregnancy (1). The average menstrual cycle length is 28 days, but variations are common. The first day of bleeding is known as day 1 of the menstrual cycle, or period. The average duration of menstruation was 5 days (range, 1 to 8 days), and the average 50 ml blood loss ranged from 20 to 80 ml), but these varied. A woman's age, physical and emotional status, and environment also affect the regularity of her menstrual cycle (2).
The symptoms that appear during menstruation are the breasts feeling heavy, full, enlarged and tender, back pain, feeling the pelvic cavity is getting fuller, headaches and acne appearing, increased irritability or sensitivity, increased metabolism and followed by a feeling of fatigue, basal body temperature increased by 0.2-0.4oC, the cervix is cloudy, sticky, impenetrable by sperm, dry with a granular pattern, the ostium closes gradually, and uterine cramps that cause menstrual pain (3,4).

Many women experience menstrual problems, one of which is pain during menstruation which is known as dysmenorrhea. Dysmenorrhea pain is the most common complaint experienced by many women. Dysmenorrhea is pain during or just before menstruation. Many adolescents experience dysmenorrhea in the first three years after menarche. Young adult women aged 17-24 years are the most likely to report painful menstruation (5). Dysmenorrhea consists of a complex of symptoms in the form of cramps in the lower abdomen that radiate to the back or legs and is usually accompanied by gastrointestinal symptoms and neurological symptoms such as generalized weakness. Based on the type, dysmenorrhea consists of primary dysmenorrhea and secondary dysmenorrhea (4,6).

Some women experience dysmenorrhea as mild pain and do not really interfere with their physical activity. But there are also women who feel. This dysmenorrhea is severe pain and really interferes with daily activities, including disturbing learning, and some even faint (1).

The incidence of menstrual pain or dysmenorrhea according to the World Health Organization (WHO) is an average of more than 50% of women in every country experiencing menstrual pain. The incidence of menstrual pain in Sweden is 72%, in the United States it is estimated that 90% experience menstrual pain and 10-15% of them experience severe dysmenorrhea which causes inability to carry out activities, while the incidence rate in Indonesia is 55% of productive women. dysmenorrhea was 64.25% which occurred from 54.89% primary dysmenorrhea and 9.36% secondary dysmenorrhea. As many as 1.07% / 1.31% of dysmenorrhea sufferers came to the obstetrics department due to the complaints they felt. Disminorhea usually occurs 12 months after menarche until the woman is approaching menopause.

Treatment that can be given to reduce menstrual pain is by administering pharmacological therapy such as administering analgesic drugs, hormonal therapy, therapy with non-steroidal drugs, anti-prostaglandins and dilation of the cervical canal. In addition, non-pharmacological therapy is also needed to reduce menstrual pain. One of the non-pharmacological therapies is to use mint leaf extract by administering peppermint tea. Mint leaves are good for the body, such as cooling the digestive tract, or if you have an upset stomach it helps relieve the pain. Peppermint contains menthol, menthyl acetate, menthone, potassium, calcium, B vitamins and several other therapeutic ingredients which make it a large component of many herbal tea recipes.

METHODS

An article search was conducted on September 13, 2021 using the Pubmeed database, Google Scholar, Science Direct, and the Cochrane Library. The keywords used are words that represent the population, namely Peppermint and Dysmenorhea. Article search is limited to those published in the last 5 years and full text articles.

RESULTS

Menarche at the age of 12, last menstruation August 17 2021, menstrual duration 5 days, amount of one pad full on the first to second day and usually change 4x a day, cycle 28-30 days, regular, liquid consistency, sometimes blood like clots chicken liver during menstruation Complaints during menstruation pain in the lower abdominal area, to the point that it interferes with activities. Complaints of pain from the first menstruation have been felt. Types of food: eggs, chicken, vegetables, tofu and tempeh, sometimes eat citrus fruits (don't

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really like fruit). More often eat junk food or snacks such as fish balls and spicy ones which mother does every day cooking, sweeping, mopping, washing, and so on (doing homework) and sometimes taking care of photocopies. Weight 45 Height 151 cm Lila 22.5 cm Abdominal circumference 76 cm BMI 20 Diagnosis of PUS with primary dysmenorrhea Problem Daily life patterns are not quite right (eating patterns, rest and smoking) Results Ask the scale of pain experienced during menstruation by doing measurement using Numeric rating scale (NRS) and Wong-Baker FACES Pain Rating Scale. NRS is on disc 8 which means severe pain and Face pain is on a scale that greatly interferes with activities.

DISCUSSION

Primary menstrual pain arises from the first menstruation and will recover on its own over time. The cause is not clear, but what is certain is that it is always related to the release of egg cells (ovulation) and the glands of the ovaries (ovaries) so that they are considered to be related to hormone balance. The patient understands and is happy that the pain he feels is normal. Patient. things that can cause excessive menstrual pain or primary dysmenorrhea, namely psychological and physical factors such as stress, shock, fatigue and anxiety. Patients understand and will avoid things that cause excessive pain.

Prevention is done to overcome and cure menstrual pain, namely avoiding excessive stress asking for the right advice can reduce the intensity of the pain because enough, don't smoke, exercise regularly, reduce consumption of foods and drinks that contain caffeine, increase consumption of vegetables, fruit, fish meat and those containing vitamin B6. Patients understand and will start implementing preventive methods to cure or reduce menstrual pain and improve their lifestyle.

Treatment for menstrual pain apart from drug therapy is a healthy lifestyle, compressing the painful part using warm water, doing the knee chest position, bathing in warm water and consuming peppermint tea. The patient understood the explanation given and was interested in consuming peppermint tea because his friend had also suggested it. The efficacy of peppermint tea based on journal research is effective in reducing dysmenorrhea pain. The patient will try to consume it.

While the amount of bleeding did not change significantly, pain and severity and all clinical signs and symptoms decreased after taking peppermint extract. Because the side effects of herbal medicines are lower than other medicines, using mint is suggested to treat dysmenorrhea symptoms. In addition, the Pregnancy Symptom Inventory (PSI) showed significant differences in symptoms for 12 weeks, prenatal yoga improves the overall quality and well-being of pregnant women. This means that there is an effect of consumption of peppermint tea on dysmenorrhea pain. There is effectiveness in giving mint leaf extract (Mentha Piperita Linn) to the level of menstrual pain in adolescents.

Management of menstrual pain based on Evidence-Based Practice also needs to consider ways and methods of implementation, not all treatments can be applied to cases of menstrual pain because it depends on the patient's condition and food intake.

Administering mint leaf extract and deep breathing relaxation techniques to the level of menstrual pain in female adolescents

In general, menstruation occurs due to an influence between the hypothalamus-pituitary-ovarian axis (hypotalamic-pituitary-ovarian axis). According to the neurohumoral theory, the hypothalamus controls the secretion of gonadotropin hormones by the adenohypophysis through the secretion of neurohormones that are channeled to the cells of the adenohypophysis. The hypothalamus itself produces Gonadotropin Releasing Hormone (LH) and Follicle Stimulating Hormone (FSH) from the pituitary (11).

Changes in hormone levels throughout the menstrual cycle occur due to a feedback mechanism between steroid hormones and gonadotropins. Estrogen causes a negative feedback on FSH, meaning that if estrogen rises, it will suppress FSH production. Whereas in LH, if the estrogen level is high, it will provide a positive feedback (11).

When menstruation begins, precisely in the early follicular phase, several follicles develop due to the influence of increased FSH. The increase in FSH levels occurs as a result of the regression of the corpus luteum, so that steroid levels are reduced. As a result of follicular development, the production of estrogen increases and suppresses FSH production. At this time LH also increases, but its current role is only to help manufacture estrogen in the follicles, to be precise in theca

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cells. This increase in estrogen levels at first occurs gradually, then quickly reaches its peak, followed by the end of follicular development. With the LH surge (LH-surge) in the middle of the cycle, it causes ovulation. In addition to producing estrogen, the corpus luteum, especially the granulosa cells, produces a lot of progesterone (11).

These hormonal changes result in excessive production of prostaglandin hormones which cause uterine contractions, the process of strong myometrial contractions in the lining of the uterus so that blood vessels experience narrowing (ischemia, endometrial disintegration, bleeding and pain). Menstrual pain causes symptoms of abdominal discomfort which is often called dysmenorrhea.

Treatment of dysmenorrhea can be done in two pharmacological and non-pharmacological ways, seeing from the journal references above pharmacological consumption that many side effects occur. Handling using non-pharmacological use of peppermint tea has very low side effects, therefore the authors take an intervention using peppermint tea.

Based on the midwifery care that the author has done for Mrs. C, the author will discuss the management of midwifery care that has been given in the form of an intervention to consume peppermint tea, carried out on September 18 2021 at the patient's house in the working area of UPT PKM Ibrahim Adjie. In this chapter, the authors will discuss the interventions that have been provided and the relevance of the available evidence.

At the beginning of the meeting, it is important for the midwife to establish a therapeutic relationship so as to create effective communication and mutual trust between the two parties which is needed in further midwifery care. Therefore, at the first meeting with Mrs. C the author approaches first so that the relationship can be established comfortably, after that the author explains the intent and purpose of implementing this midwifery care so that a relationship of mutual trust is established and avoids misunderstandings between the client and Mrs. C is willing to consume peppermint tea during the first 3 days of menstruation, informed consent is done orally and in writing Mrs. C already agreed.

The first thing the writer did was to do an analysis to get subjective data from the patient. Subjective data obtained from interview results (eg identity, patient complaints). Mother said that if menstruation hurts to the point that it interferes with activities and mothers are used to taking medicine during menstruation to reduce pain. From the complaints experienced, the authors try to provide interventions with non-pharmacological methods that are safe and in accordance with the patient's condition, namely consuming peppermint tea. The author schedules peppermint tea consumption to be carried out in the first 3 days of menstruation and evaluated on day 4 and asked the patient not to consume food and drink junk food first for 3 days, then not smoke or pave and go to bed early in one day for at least 7 hours Mrs. C agreed and said this was a challenge for herself to change her lifestyle . Previously, pain scale measurements were carried out to measure pain, here the author uses two assessment methods, namely:

This type of pain scale is used by measuring pain, where the patient will choose a number from 0-10, with the following description: Number 0 means no pain b. Number 1-3 mild pain c. Number 4-6 moderate pain d. Number 7-10 severe pain (12). Wong-Baker Pain Rating Scale is a method of calculating the scale pain that has been created and developed by Donna Wong and Connie Baker. This method has a way of detecting pain scales by looking at facial expressions that have been grouped into several levels of pain (13).

At the first meeting, measurements were taken with the results of the NRS and the Wong-Baker Pain Rating Scale at 8, which means severe pain and interferes with activities.

The processing of peppermint into tea is as follows:
1. Prepare 100gr peppermint leaves.
2. Then washed, dried in the sun for 6 hours
3. Then for drying in the oven for 5 minutes
4. Optional can be mashed or left
5. Then measure it and put it in a tea bag

The finished peppermint tea is due to the limited time the writer has to process the peppermint leaves. On day 4 (22 September 2021) the author assesses or evaluates the interventions that have been carried out.

There is relevance between the results of interventions with theory and the results of research that has been carried out as according to Ibaadillah., et al (2017) the results of his research stated that there was an effect of consumption of peppermint tea in reducing dysmenorrhea pain, which was shown by

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41.3% of respondents claiming not to experience dysmenorrhea after consuming tea peppermint. This is in line with research conducted by Wijyanti, et al (2020) where there was a significant difference between the control group and the treatment before and after the intervention where menstrual pain or dysmenorrhea in the control group was lower, namely z = -3.557 and in the control group z = 4.472 , then it is the same as the research conducted by Sunarsih., et al (2021) providing interventions to 2 groups, where group 1 was given peppermint tea and group 2 was taught deep breathing relaxation, the results of the intervention showed that there was higher effectiveness in reducing dysmenorrhea pain in the group Treatment 1. Then the results of another study conducted by Masimo., et al (2021) compared the effectiveness of consuming mefenamic acid with peppermint extract in reducing dysmenorrhea. respondents, this is proportional inversely with peppermint extract the effectiveness is sufficient and the side effects are very low felt by the respondents.

Theoretically, the menthol found in mint leaves has an antispasmodic effect, namely its ability to block calcium channels in the intestinal smooth muscle so that it will reduce contractions in the myometrium. Then, the omega-3 fatty acids contained in peppermint help decrease prostaglandin production by inhibiting the transport and formation of prostaglandin hormones, by decreasing prostaglandins, menstrual cramps can be reduced. So here it can be concluded that peppermint tea can reduce menstrual pain levels so that no complaints arise due to menstrual pain and the use of peppermint tea is indicated to reduce menstrual pain levels.

The limitations that the author experiences in providing this care are: short time in giving intervention and only one done, in the menstrual cycle so that it can affect the results. Lifestyle can affect the outcome of the intervention. Evaluation on day 4 is not carried out directly but by phone this will reduce the findings that can be reviewed by the author.

CONCLUSION

After the author carried out midwifery care management for Mrs. C by giving the peppermint tea intervention, the conclusions can be drawn:

1. At the time of the intervention, dysmenorrhea pain scale after being measured using the Numeric rating scale (NRS) and the Wong-Baker FACES Pain Rating Scale was at scale 8 or severe pain.
2. After the peppermint tea consumption intervention was carried out on for 3 days, another measurement of pain on day 4 using the Numeric rating scale (NRS) and the Wong-Baker FACES Pain Rating Scale was in moderate pain.
3. Peppermint tea intervention on is able to reduce dysmenorrhea significantly.

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